

ABSTRACT OF THE DISCLOSURE

5 A technique for read error failover processing in a mirrored disk system such as
a Redundant Array of Inexpensive Disks (RAID) system, where individual disk units
perform Logical Block Address (LBA) remapping. A read error causes a disk controller
to report an "unrecoverable" read error to a RAID controller. After receiving this report
of an unrecoverable read error, rather than simply switching over to a mirror, the RAID
10 controller first checks to see whether the disk that caused the error can successfully
reassign an LBA. In particular, the RAID controller can retrieve the data that was
associated with the failed LBA from the mirror, and then write that data to the offending
disk. The disk controller for that disk will then perform its standard LBA remapping,
and write the data to a new, good sector. Only if this process does not succeed is the
15 offending disk then treated by the RAID controller as having failed sufficiently to
require failover to the mirror.